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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,231	12/03/2003	Greg R. Black	CS21051RL	6173
20280	7590	04/21/2006	EXAMINER	
MOTOROLA INC 600 NORTH US HIGHWAY 45 ROOM AS437 LIBERTYVILLE, IL 60048-5343			DEAN, RAYMOND S	
			ART UNIT	PAPER NUMBER
			2618	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/614,231	<b>Applicant(s)</b> BLACK ET AL.	
	<b>Examiner</b> Raymond S. Dean	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0703</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. The word "adapted" renders the claim(s) 23 – 24, 26, and 28 indefinite because it is unclear as to what is actually set forth. The use of the word "adapted" makes it unclear as to what function is actually taking place thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 – 2, 11 – 21, 23, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Mansour (US 2005/0085253).

Regarding Claim 1, Mansour teaches a method for establishing direct mobile-to-mobile communication between cellular mobile terminals, said method comprising: selecting a frequency designated as a mobile communication frequency within a cellular communication system (Section 0027, the mobile phones that provide both cellular calls and walkie-talkie calls will communicate on a mobile communication frequency within the cellular communication system); transmitting by a first mobile terminal a communication initiation sequence at the selected frequency (Section 0038, the mobile will monitor the second paging channel for a particular notification, which comprises the initiation sequence); monitoring by a second mobile terminal the designated mobile communication frequencies; and detecting by the second mobile terminal the communication initiation sequence (Section 0038).

Regarding Claim 2, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches wherein prior to transmitting by a first mobile terminal a communication initiation sequence at the selected frequency, a user actuation is received (Section 0038, in order to invoke the walkie-talkie function a user actuation such as activating a push-to-talk button must occur).

Regarding Claim 11, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches frequency and timing information for use in the remainder of the communication between the mobile terminals (Section 0038, there will be timing and frequency information in order for the mobile stations to engage half duplex communications).

Regarding Claim 12, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches prior to selecting a frequency and further establishing the direct mobile-to-mobile communication, scanning for existing network coverage by the first mobile terminal, wherein direct mobile-to-mobile communication is authorized in areas where at least one of network coverage is insufficient or where authorization for direct mobile to mobile communication is obtained from the network (Section 0027, the mobile communications system supports walkie-talkie calls thus there will be authorization for said walkie-talkie calls).

Regarding Claim 13, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches wherein, when the authorization is obtained from the network, the frequency selected corresponds to any frequency designation supplied by

the network (Section 0027, the mobile communications system will supply a particular frequency designation).

Regarding Claim 14, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches after selecting a frequency, selecting a channel associated with the selected frequency after monitoring the channel to insure the channel is not being currently used (Section 0038).

Regarding Claim 15, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches wherein the initiation sequence is transmitted for a period of time having a duration that overlaps at least a portion of the wake-up period of the second mobile terminal (Section 0038, the mobile station will wake up and monitor the second paging channel for the notification during a particular slot cycle).

Regarding Claim 16, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour further teaches wherein after detecting the communication initiation sequence by the second mobile terminal, the second mobile terminal transmits an acknowledgement signal, in response to a detected communication initiation sequence (Section 0038, the mobile station will transmit an acknowledgement to the mobile station that transmitted the notification on the second paging channel).

Regarding Claim 17, Mansour teaches all of the claimed limitations recited in Claim 16. Mansour further teaches wherein the acknowledgement signal includes receiver quality data (Section 0038, the mobile station will transmit an acknowledgement to the mobile station that transmitted the notification on the second paging channel, said acknowledgement will be transmitted at an adequate signal

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strength or power, which is quality data, such that the initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 18, Mansour teaches all of the claimed limitations recited in Claim 17. Mansour further teaches wherein the receiver quality data includes receiver level information (Section 0038, the mobile station will transmit an acknowledgement to the mobile station that transmitted the notification on the second paging channel, said acknowledgement will be transmitted at an adequate signal strength level or power level, which is quality data, such that the initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 19, Mansour teaches all of the claimed limitations recited in Claim 16. Mansour further teaches wherein the acknowledgement signal is transmitted by the second mobile terminal at the selected frequency at alternative times relative to the transmissions from the first mobile terminal at the selected frequency (Section 0038, the mobile station will transmit the acknowledgement to the initiating mobile station during times when said initiating mobile station is not transmitting such that said initiating mobile station can receive said acknowledgement successfully).

Regarding Claim 20, Mansour teaches all of the claimed limitations recited in Claim 19. Mansour further teaches wherein the alternative times that the second mobile terminal transmits a signal at the selected frequency has a predetermined time offset relative to any corresponding adjacent transmission from the first mobile terminal (Section 0038, the mobile station will transmit the acknowledgement to the initiating mobile station during times when said initiating mobile station is not transmitting such

that said initiating mobile station can receive said acknowledgement successfully, these times will be offset from the time the initiating mobile station is transmitting).

Regarding Claim 21, Mansour teaches all of the claimed limitations recited in Claim 19. Mansour further teaches wherein the transmissions from each of the first and second mobile terminals at the selected frequency are part of a time division duplex channel (Section 0022).

Regarding Claim 23, Mansour teaches a cellular mobile terminal adapted for direct mobile to mobile communication, said mobile terminal comprising: a transmitter (Figure 2, Section 0028 lines 15 – 17); a receiver (Figure 2, Section 0028 lines 15 – 17); and a control circuit, coupled to the transmitter and the receiver (Figure 2, Section 0028 lines 3 – 4), wherein at least one of the transmitter and the receiver is adapted to function at a frequency of operation, corresponding to the other one of the transmitter and the receiver (Section 0027, a typical cellular system will have a transmit frequency band and a corresponding receive frequency band).

Regarding Claim 28, Mansour teaches all of the claimed limitations recited in Claim 23. Mansour further teaches a user actuated switch adapted to initiate a mobile -to-mobile communication (Section 0038, in order to invoke the walkie-talkie function a user actuation such as activating a push-to-talk switch must occur).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 – 5, 7 – 10, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansour (US 2005/0085253) in view of Hunzinger et al. (US 2004/0116132).

Regarding Claim 3, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour does not teach determining the region in which the first mobile terminal is operating, and selecting a mobile communication frequency for the determined region.

Hunzinger teaches determining the region in which the first mobile terminal is operating, and selecting a mobile communication frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the location is selected there will be a frequency provided by said system for use).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Mansour with the determination and selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

Regarding Claim 4, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches wherein the mobile

communication frequency is a mobile transmission frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the location is selected there will be a frequencies provided by said system for use, said frequencies comprise transmission and reception frequencies).

Regarding Claim 5, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches wherein the mobile communication frequency is a mobile reception frequency for the determined region (Sections: 0026, 0029 – 0039, when the wireless communication system for the location is selected there will be a frequencies provided by said system for use, said frequencies comprise transmission and reception frequencies).

Regarding Claim 7, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches receiving one or more global positioning system signals (Section 0029).

Regarding Claim 8, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Hunzinger further teaches maintaining a record of the last region in which the first mobile terminal successfully operated (Section 0032).

Regarding Claim 9, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour does not teach selecting a frequency that is designated as a mobile transmit frequency in a first supported region and is designated as a mobile received frequency in a second supported region.

Hunzinger teaches selecting a frequency that is designated as a mobile transmit frequency in a first supported region and is designated as a mobile received frequency

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in a second supported region (Sections: 0026, 0029 – 0039, the mobile can select for example a North American GSM system in one location and a European GSM system in another location, the frequency band for receiving in the North American system is the same as the frequency band for transmitting in the European system).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Mansour with the determination and selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

Regarding Claim 10, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 9. Hunzinger further teaches wherein the first supported region is the region in which the first mobile terminal is operating (Sections: 0026, 0029 – 0039).

Regarding Claim 22, Mansour teaches all of the claimed limitations recited in Claim 1. Mansour does not teach wherein the cellular mobile terminals including the first mobile terminal and the second mobile terminal are multi-region devices.

Hunzinger teaches wherein a cellular mobile terminal including a mobile terminal is a multi-region device (Sections: 0026, 0029 – 0039, the device can be in operate in different geographical locations).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Mansour with the determination and

selection method of Hunzinger for the purpose of providing a system where the mobile station can limit the number of systems required for searching based on the geographic location of the mobile station thereby optimizing service acquisition as taught by Hunzinger.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mansour (US 2005/0085253) in view of Hunzinger et al. (US 2004/0116132) as applied to Claim 3 above, and further in view of Tanaka (US 6,819,919).

Regarding Claim 6, Mansour in view of Hunzinger teaches all of the claimed limitations recited in Claim 3. Mansour in view of Hunzinger does not teach receiving an operating region selection from a user.

Tanaka teaches receiving an operating region selection from a user (Column 3 lines 7 – 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Mansour in view of Hunzinger with the selection method of Tanaka for the purpose of providing an alternative means for providing the location of the mobile station as taught by Tanaka.

9. Claims 24, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansour (US 2005/0085253) in view of Abdelgany et al. (US 6,584,090).

Regarding Claim 24, Mansour teaches all of the claimed limitations recited in Claim 23. Mansour does not teach wherein the receiver includes a pre-selection filter,

which is adapted to pass frequencies including transmitter frequencies of operation of the mobile terminal.

Abdelgany teaches a pre-selection filter, which is adapted to pass frequencies including transmitter frequencies of operation of the mobile terminal (Column 13 lines 8 – 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Mansour with the filter of Abdelgany for the purpose of passing only the appropriate transmission band for CDMA as taught by Abdelgany.

Regarding Claim 26, Mansour teaches all of the claimed limitations recited in Claim 23. Mansour does not teach wherein the transmitter includes a transmission bandpass filter, which is adapted to pass frequencies including receiver frequencies of operation of the mobile terminal.

Abdelgany teaches a bandpass filter, which is adapted to pass frequencies including receiver frequencies of operation of the mobile terminal (Column 13 lines 37 – 39, image reject filters are bandpass filters).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Mansour with the filter of Abdelgany for the purpose of filtering out image noise, which is a standard function of image reject filters.

10. Claims 25, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansour (US 2005/0085253) in view of Abdelgany et al. (US 6,208,844).

Regarding Claim 25, Mansour does not teach wherein the receiver includes a voltage-controlled oscillator having an operational range that is extended to include transmitter frequencies of operation of the mobile terminal.

Abdelgany teaches a voltage-controlled oscillator having an operational range that is extended to include transmitter frequencies of operation of the mobile terminal (Column 6 lines 36 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Mansour with the voltage-controlled oscillator (VCO) of Abdelgany for the purpose of up-converting the signal transmitted from the mobile terminal to the proper transmit radio frequency (RF) as taught by Abdelgany.

Regarding Claim 27, Mansour does not teach wherein the transmitter includes a voltage-controlled oscillator having an operational range that is extended to include receiver frequencies of operation of the mobile terminal.

Abdelgany teaches a voltage-controlled oscillator having an operational range that is extended to include receiver frequencies of operation of the mobile terminal (Column 7 lines 31 – 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mobile terminal of Mansour with the voltage-controlled oscillator (VCO) of Abdelgany for the purpose of down-converting the signal

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received at the mobile terminal to the proper intermediate frequency (IF) for further processing as taught by Abdelgany.

### **Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). **PLEASE NOTE:** Art Unit 2684 is now Division 2618.



Raymond S. Dean  
April 3, 2006

  
EDWARD F. URBAN

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600